

REMARKS

Applicants acknowledge receipt of the Office Action dated May 11, 2005. Claims 2-5, 7-9, 12-21, 27, 29-37, and 40-46 are pending. By this Response, Applicants have amended claim 29 and cancelled claims 38 and 39. The Examiner has rejected claims 29, 2-5, 7-9, 12-21, 27-28, and 30-46 under 35 U.S.C. § 102 as being anticipated by Singleton, U.S. Patent No. 6,262,131 ("*Singleton*"). Applicants believe that all pending claims are allowable and respectfully request reconsideration and allowance of these claims.

I. Claims 29, 2-5, 7-9, 12-21, 27, 30-37, and 40-46 are allowable over *Singleton*.

Applicants respectfully traverse the Examiner's rejections of claims 29, 2-5, 7-9, 12-21, 27, 30-37, and 40-46 as being anticipated by *Singleton*. Please note that by this Response, Applicants have cancelled claims 38 and 39. In addition, Applicants note that the Examiner has included withdrawn claim 28 in the rejection. As this claim was withdrawn in the previous Response to Restriction Requirement Dated December 28, 2004, Applicants respectfully request the Examiner to remove such withdrawn claim 28 from this rejection. Moreover, Applicants submit that the claims are not anticipated by *Singleton* because *Singleton* fails to disclose each and every limitation of these rejected claims.

Claim 29 is an independent claim upon which claims 2-5, 7-9, 12-21, 27, 30-37, and 40-46 depend. Claim 29 recites "(1) depositing a compound of a catalytic metal selected from Groups 8, 9, and 10 of the Periodic Table on a support material comprising boehmite to form a composite material; and (2) calcining the composite material to form the catalyst." Nothing in *Singleton* teaches or suggests depositing a compound of a catalytic metal on a support material comprising boehmite to form a composite material and calcining the composite material to form the catalyst. Instead, *Singleton* teaches the conversion of a boehmite precursor to gamma-alumina *before* impregnation of the catalytic metal onto γ -alumina. (*Singleton*, col. 7, lns. 15-25; col. 13, lns.

33-35) For instance, *Singleton* teaches that the γ -alumina be produced from a boehmite prior to any impregnation, typically by calcination of at least 350°C. (*Singleton*, col. 7, lns. 15-25) Therefore, *Singleton* teaches that the conversion of boehmite to γ -alumina is performed via calcination but *in the absence of a catalytic metal or a precursor thereof*.

Furthermore, Claim 29 as amended recites "wherein the process comprises a multi-step incipient wetness impregnation in step (1), and wherein step (2) includes at least a first calcination and a last calcination; and wherein the last calcination is performed at a temperature lower than that of the first calcination." Nothing in *Singleton* teaches or suggests a multi-step incipient wetness impregnation of a catalytic metal, wherein such a last calcination is performed at a temperature lower than that of the first calcination. Instead, *Singleton* teaches a multi-step impregnation method with a calcination step after each impregnation step, with the calcinations at the same temperature. For instance, *Singleton* teaches "CATAPAL B alumina in the boehmite form was calcined at 750°C. for 16 hours to convert it to γ -alumina. It was then presieved to 400-0 mesh and impregnated in three steps (40%, 30%, and 30%), each step utilizing an acetone solution of cobalt nitrate [$\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$], ruthenium acetylacetonate, and lanthanum nitrate [$\text{La}(\text{NO}_3)_3 \cdot \text{H}_2\text{O}$] in an appropriate quantity to achieve incipient wetness (ca. 1 ml/g) with the desired loadings of cobalt, ruthenium, and lanthanum. Following each step, the catalyst precursor was dried in a rotor evaporator at 40°C for at least 30 minutes and calcined in air at 300°C for 2 hours." (*Singleton*, col.18, lns. 46-56, emphasis added)

The Examiner has also indicated that claim 29 is a "product-by-process claim." (Office Action, page 3, ln. 8) Applicants respectfully submit that claim 29 is not such a "product-by-process claim" but is instead a process claim as recited for a "process for producing

hydrocarbons." For instance, claim 29 recites "converting at least a portion of the feed stream to hydrocarbon products with the catalyst."

In view of the recitations in claim 29 that are neither taught nor suggested by *Singleton*, the Applicants respectfully request that the Examiner withdraw the § 102 rejection and allow claim 29. Applicants further request that the Examiner also withdraw the § 102 rejections of dependent claims 2-5, 7-9, 12-21, 27, 30-37, and 40-46, since it is submitted that independent claim 29 is allowable. Dependent claims 2-5, 7-9, 12-21, 27, 30-37, and 40-46 must *a fortiori* also be allowable, since they carry with them all the limitations of the independent claim to which they ultimately refer.

II. The Specification has been amended.

In this Response, Applicants have amended the specification at paragraph [00137] on page 34 to add in the appropriate serial numbers in the blanks.

III. Conclusion


Applicants respectfully request reconsideration, allowance of all pending claims and a timely Notice of Allowance be issued in this case. If the Examiner feels that a telephone conference would expedite the resolution of this case, the Examiner is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood

that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769.

Respectfully submitted,



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